

REMARKS

Applicants have carefully considered the Examiner's comments set forth in the Office Action of November 5, 2009 and the Advisory Action of January 8, 2010. Applicants respectfully request reconsideration of the above-identified application in view of the following remarks.

Claims 1 to 39 remain in this application. Claims 3, 4, 8, 9, 14-19, 22, 23, and 27-32 are withdrawn. Claims 1, 6, and 20 are amended. Specifically, claims 1, 6, and 20 have been amended to recite that the formed platform flow channel "is configured to promote increased capillary force and uniform flow of the sample". Support for this amendment may be found, for example, in paragraphs [36] and [43] of the present description. Claim 1 has further been amended in the interest of clarity to replace the phrase "can flow" with the term "flows". This amendment finds support in, for example, original claim 1.

The Office Action

Claim Rejections - 35 U.S.C. § 103

Claims 1, 2, 5, 6, 10, and 11 were rejected for being obvious over Naka (U.S. 6,001,307) in view of Hodges (U.S. 6,612,111). We disagree with the Examiner. However, solely in the interest of advancing the prosecution of this application, the independent claims have been amended to recite that the platform flow channel of the presently claimed platform "is configured to promote increased capillary force and uniform flow of the sample" and that the sample flows by capillary action from the sample application means, through the platform flow channel, and into and through the membranes. This amendment makes it clear that the platform flow channel excludes a membrane. Further support in the description for the platform flow channel excluding a membrane may be found, for example, in paragraph [46], which states that "when the fluid sample has completed its capillary flow to the end of membrane 20 the platform flow channel is substantially empty" and configured for receiving a fluid sample.

The presently claimed platform thus requires an empty platform flow channel through which sample flows by capillary action. As the Examiner asserted in the interview summary, neither Naka nor Hohmes use capillary flow in the platform flow channel. Indeed, both of these cited references require the use of suction in order to move the sample through a device and Naka

specifically teaches away from the use of capillarity (see, for example, col. 2, lines 10-25, col. 3, lines 15-18, col. 4, lines 11-22, col. 11, lines 39-44, and col. 12, lines 47-52 of Naka). Accordingly, at least this feature of the presently claimed invention is not taught or suggested by Naka or Hodges, alone or in combination. For at least the foregoing reasons, we assert that the presently claimed invention is patentable over Naka, and Hodges. We request that the rejection be withdrawn.

Claims 20, 24, 25, 34, and 35 were rejected for being obvious over Naka in view of Hodges and McCroskey (U.S. 5,271,895). We disagree with the Examiner for at least the reasons set forth above. McCroskey was cited for discussing specific membrane components. However, like Naka and Hodges, McCroskey does not teach or suggest at least the use of capillarity in a platform flow channel, as is presently claimed. Therefore, we assert that the presently claimed invention is patentable over Naka, Hodges, and McCroskey. We request that the rejection be withdrawn.

Claims 2, 7, and 21 were rejected for being obvious over Naka in view of Hodges, McCroskey, and Zimmer (WO 99/29429). We disagree with the Examiner for at least the reasons set forth above. Claims 2, 7, and 21 are dependent claims that depend ultimately from independent claims 1, 6, or 20, respectively, and therefore incorporate their novel and inventive features by virtue of dependency. Zimmer was solely cited for teaching the presence of an indent in the bottom surface of the top layer and Zimmer fails to overcome the deficiencies of the remaining cited references with respect to the presently claimed invention. More specifically, Zimmer only teaches a capillary zone (3) that extends from the sample application opening (4) to the opposite end of the detection element (2). See col. 5, lines 56-57 of Zimmer. In this way, Zimmer teaches that the sample liquid contacts the whole area of the detection element (2) and ensures a homogenous sample distribution over the detection element (2). See col. 5, lines 58-61. As can be seen from Figures 1B, C, and D of Zimmer, the sample flows through the channel and washes over the top of the detection element such that the sample is conventionally provided to the detection element. This is contrary to the presently claimed invention in which the sample flows through a platform flow channel and into an edge of an upstream end of a membrane. For at least the foregoing reasons, we assert that the presently claimed invention is patentable over Naka, Hodges, McCroskey, and Zimmer. We request that the rejection be withdrawn.

Claims 12 and 13 were rejected for being obvious over Naka in view of Hodges and Freitag (U.S. 6,214,629). We disagree with the Examiner for at least the reasons set forth above. Claims 12 and 13 are dependent claims that depend ultimately from independent claim 6, and therefore incorporate its novel and inventive features by virtue of dependency. Freitag was solely cited for teaching the detection of Troponin I and Freitag fails to overcome the deficiencies of the remaining cited references with respect to the presently claimed invention. Therefore, we assert that the presently claimed invention is patentable over Naka, Hodges, and Freitag. We request that the rejection be withdrawn.

Claim 26 was rejected for being obvious over Naka in view of Hodges, McCroskey, and Freitag. We disagree with the Examiner for at least the reasons set forth above. Claim 26 is a dependent claim that depends ultimately from independent claim 20, and therefore incorporates its novel and inventive features by virtue of dependency. Therefore, we assert that the presently claimed invention is patentable over Naka, Hodges, McCroskey, and Freitag. We request that the rejection be withdrawn.

Claims 36 to 39 were rejected for being obvious over Naka in view of Hodges and Deng (U.S. 6,740,293). We disagree with the Examiner for at least the reasons set forth above. Claims 36 to 39 are dependent claims that depend ultimately from independent claims 1, 6, and 20 and therefore incorporate their novel and inventive features by virtue of dependency. Deng was solely cited for teaching open areas for inhibiting the flow of sample into space between the surfaces of the top and bottom layers and for teaching mating indents and protrusions in the top and bottom layers. Deng however fails to overcome the deficiencies of the remaining cited references with respect to the presently claimed invention. Therefore, we assert that the presently claimed invention is patentable over Naka, Hodges, and Deng. We request that the rejection be withdrawn.

CONCLUSION

For the reasons detailed above, it is submitted all remaining claims (claims 1 to 39) are now in condition for allowance. An early notice to that effect is therefore earnestly solicited.

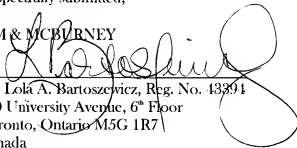
☒ This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.

☒ The Commissioner is hereby authorized to charge any filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Deposit Account 192253.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Dr. Lola A. Bartoszewicz, at Telephone Number (416) 849-8420.

Respectfully submitted,

SIM & MCBURNEY



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Date

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